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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
| 10/817,439 | 04/01/2004 | Panu K. Zoller | 53766US010 | 2823 |
| 32692 7590 04/03/2008 3M INNOVATIVE PROPERTIES COMPANY PO BOX 33427 ST. PAUL, MN 55133-3427 | | | EXAMINER AHMAD, NASSER | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 1794 | |
| | | | NOTIFICATION DATE | DELIVERY MODE |
| | | | 04/03/2008 | ELECTRONIC |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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| | | | |
|------------------------------|-------------------------------|-------------------------------|--|
| Office Action Summary | Application No. 10/817,439 | Applicant(s) ZOLLER ET AL. | |
| | Examiner Nasser Ahmad | Art Unit 1794 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 September 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-53 and 55 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-53 and 55 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to:
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>9/21/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION
Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/21/2007 has been entered.

Non-compliant Withdrawn

2. Claim 21, as submitted on 6/22/2007 is found to be compliant with 37CFR 1.173d and the reasons of record made in the Office Action of 4/23/2007 is withdrawn.

Rejections Withdrawn

3. Claims 1-2, 7-9, 22-24, 31-32, 35, 38, 40-41, 47-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson (5178924) maintained in the Office Action of 4/23/2007 has been withdrawn in view of the response filed on 9/21/2007.

4. Claims 6, 10, 15, 20-21, 29, 33-34 and 45-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Johnson (5167995) maintained in the Office Action of 4/23/2007 has been withdrawn in view of the response filed on 9/21/2007.

5. Claims 4-5 and 43-44 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Johnson in view of Reinders (6037028) maintained in the Office Action of 4/23/2007 has been withdrawn in view of the response filed on 9/21/2007.

6. Claim 55 is rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson (5178924) in view of Reinders (6037028) made in the Office Action of 4/23/2007 has been withdrawn in view of the response filed on 9/21/2007.

Response to Arguments

7. Applicant's arguments with respect to claims 1-53, 55 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 1-3, 7-9, 22-24, 31-32, 35, 38, 40-42, 47-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson'924.

Johnson'924 relates to (for claim 1, 22, 35, 40, 47) an adhesive tape assembly comprising a double-side adhesive tape with one side of pressure sensitive adhesive (PSA) and the opposite side having heat-activated adhesive (HAA). The tape is in a roll form with the PSA in contact with the release liner or the support sheet front side and the back side of the release liner is in contact with the HAA (col. 5, lines 1-12). The

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backside of the release liner is provided with a layer containing friction-enhancing agent such as ethylene acrylic acid (EAA) mixtures containing tackifiers to provide for roll stability (col. 5, lines 15-24). Johnson'924 fails to teach that the backside stability layer is ethylene vinyl acetate (EVA). However, Johnson'924 discloses, in col. 4, lines 54-65, that the release material can be EAA or EVA. Therefore, it would have been obvious to one having ordinary skill in the art to use the teaching that EVA material containing tackifier, instead of EAA with tackifier, would provide for a stability layer because the two are functionally equivalent as the friction enhancing material and would provide for roll stability.

For claims 2, 41, the heat-activated adhesive layer has a contact surface which contacts said roll stability layer (col. 5, lines 15-24 teaches that the adhesive contacts the roll layer).

As for claims 3, 42, the phrase "upto about 26 microinches" is interpreted to include zero, hence, the surface roughness is zero.

For claims 7, 23, 31, 48-49, in col. 4, lines 54-65, Johnson teaches that the release liner material can be low, medium or linear low density polyethylene. The low to medium density would include density of upto about 0.92 g/cc.

Regarding claims 8, 24, 50, the liner can be of multi-layered construction (col. 7, lines 18-26).

For claims 9, 32, the pressure sensitive adhesive contacts the release material (col. 5, lines 4-9).

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For claim 38, Johnson'924 teaches that silicone is known in the art as a release material (col. 4, lines 35-40).

As for claim 47, the phrase "upto about 5%" is interpreted to include zero, hence the antiblocking amount is zero.

10. Claims 4-5, 43-44, 55 are rejected under 35 U.S.C. 103(a) as being unpatentable over Johnson in view of Reinders (6037028).

Johnson, as discussed above, fails to teach that the HAA is polyolefin material (for claim 4-5, 43-44, 55). Reinders discloses that polyethylene material such as layers 29 and 30 serve as heat activated adhesive layer (col. 5, lines 36-37) to provide for a strong bond. Therefore, it would have been obvious to one having ordinary skill in the art to utilize Reinders' teaching of using polyethylene material as HAA in the invention of Johnson with the motivation to provide for strong bond when activated.

11. Claims 6, 10-21, 25-30, 33-34, 36-37, 39, 45-46, 51-53, are rejected under 35 U.S.C.103(a) as being unpatentable over Johnson'924 in view of Johnson (5167995).

Johnson'924, as discussed above, fails to teach that the PSA comprises acrylic foam PSA (for claim 6). Johnson'995 discloses a double-sided adhesive assembly having PSA on one side and HAA on the opposite side of the tape assembly (col. 4, lines 40-

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47). Col. 6, line 15 recites that the adhesive can be acrylic foam based PSA.

Antiblocking material is contained in the release material (col. 11, lines 15-23).

Therefore, it would have been obvious to one having ordinary skill in the art to utilize Johnson'995's teaching of using antiblocking agent in the release liner in the invention of Johnson'924 with the motivation to provide for releasability of the release liner from the HAA while maintaining roll stability.

For claim 10, the vinyl acetate content is inherently low in the EVA of Johnson'924 because, as explained hereinabove, said EVA is found to be obvious functional equivalent to the exemplary stability material of ethylene acrylic acid and because the HAA is unrolled from the release liner (Johnson'924, col. 5, lines 15-24).

For claims 11-14, 25-28, 36-37, 39, 51-53, the content of vinyl acetate to be less than 28% by wt., 5-24% by wt., 8-20% by wt., or about 12% by wt., would have been obvious optimization for providing stability to the roll, while permitting unwinding of the tape from said roll.

As for claims 15-16, 29-30, the phrase "upto about 5%" is interpreted to include zero, hence the antiblocking amount is zero.

For claims 17-19, the coefficient of friction of the roll stability layer is greater than about 0.4, greater than 0.5, at least about 0.55, based on optimization through routine experimentation, because the material for the roll stability layer is the same EVA as is being claimed and is recited to provide for stability to the adhesive tape roll with the HAA thereon

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With regard to claim 20-21, the tape outer circumferential diameter being at least 20 times the width, it would have been obvious to one having ordinary skill in the art to modify Johnson by providing the roll diameter to be at least 20 times the width of the tape, based on optimization through routine experimentation, with the roll stability layer therewith.

For claims 33-34, the release layer comprises low density polyethylene having density of about 0.92 g/cc (Johnson'924).

Response to Arguments

12. Applicant's arguments filed 9/21/2007 have been fully considered but they are not persuasive.

Responding to applicant's argument that the functional equivalence must be recognized in the prior art and cannot be based on ... the mere facts that the components at issue are functional or mechanical equivalent, applicant is directed to Johnson'924, wherein it is clearly disclosed that the roll stability layer can be for example ethylene acrylic acid (EAA) containing tackifiers, while in col. 4, Johnson'924 recites that EAA and EVA are functionally equivalent material for release layer. Therefore, it would have been obvious to one having ordinary skill in the art to substitute EVA, for EAA, with tackifiers to provide for the roll stability function. Further, applicant has merely opined to the contrary but has failed to show that the EVA containing tackifiers will not function the same as EAA containing tackifiers, as a roll stability layer in Johnson'924.

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Further, as evidentiary support for functional equivalency, applicant is directed to Gronnevik (USP 5845588) which teaches that it is well known to use EVA as a friction layer to prevent slippage from a polyolefin surface (col. 5, lines 36-44, 54-57). This shows that use of said EVA on a polyolefin surface as stability layer is known.

For the argument that 35 USC 103 rejections over Johnson'924 in view of Johnson'995 and Johnson'924 in view of Reinders, the above explanations apply *a fortiori* herein.

Information Disclosure Statement

13. The IDS submitted on July 5, 2007 was re-submitted by the applicant on 9/21/2007, an initialed copy of which is attached herewith.

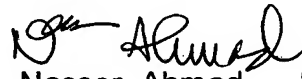
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nasser Ahmad whose telephone number is 571-272-1487. The examiner can normally be reached on 7:30 AM to 5:00 PM, and on alternate Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Nasser Ahmad
Primary Examiner
Art Unit 1794
1/8/07

N. Ahmad.
January 9, 2008.